

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosoda et al. (US 3,805,542) in view of Scott (US 3,872,684)..

Regarding claim 1, Hosoda et al. teach an air conditioner (figs. 8-10) comprising: a case (21) of which one side is positioned at an indoor side (side adjacent to evaporator 31) and another side is positioned at an outdoor side (side adjacent to condenser 34); an indoor heat exchanger (evaporator 31) mounted inside the case (illustrated in figure 9) positioned at the indoor side (illustrated in figure 9) thus to be heat-exchanged with the indoor air (see arrow flowing through the evaporator); an indoor centrifugal fan (29) opposite to the indoor heat

exchanger (illustrated in figure 9) for generating a blowing force so that the indoor air can pass through the indoor heat exchanger (the indoor heat exchanger is capable of performing this intended use function); an outdoor heat exchanger (34) mounted inside the case (illustrated in figure 9) positioned at the outdoor side (illustrated in figure 9) thus to be heat-exchanged with the outdoor air (see arrow flowing through the condenser); and an outdoor centrifugal fan (32) opposite to the outdoor heat exchanger (illustrated in figure 9) that generates a centrifugal force to blow the outdoor air [this intended use limitation is capable of being performed by the outdoor centrifugal fan], wherein the outdoor centrifugal fan comprises: a hub (annotated below) formed in a disc shape (illustrated below) connected to a driving motor (35) by a rotational shaft (shaft extending between the motor and both blowers 29 and 32); a plurality of blades (annotated below) each having one end protruding from a surface of the hub (illustrated below) and disposed at the outer side of the hub in a circumferential direction (illustrated below) with the same interval therebetween (illustrated below); and a supporting ring (the ring as annotated below) coupled to another end of each of the plurality of blades to support the blades [as illustrated below, portions of the ring are disposed in a vicinity between the blades]. It is noted that the Applicant has not specified the boundaries of the indoor side and the outdoor side.

However, Hosoda fails to disclose that a dispersion ring is connected to the hub of the centrifugal fan by a plurality of support ribs.

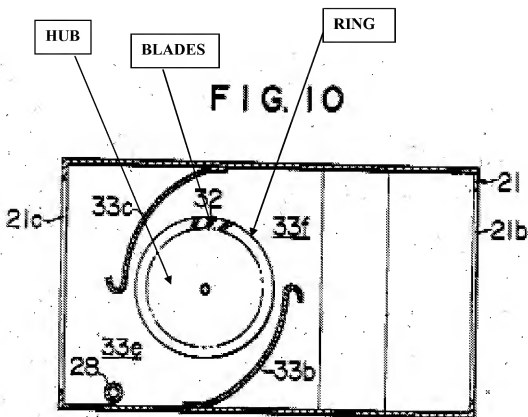
Scott teaches a condensate dispersion unit assembly (referring to figures 1-5) comprising a dispersion ring (24) connected to the fan via a plurality of support ribs (lugs 22), wherein both the dispersion ring and support ribs are connected to a fan (18).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the air conditioner of Hosoda et al. to include the condensation dispersion unit assembly to a fan as taught by Scott in order to prevent insects and bacteria from building up inside of the air conditioner, thus preventing a user from being contaminated.

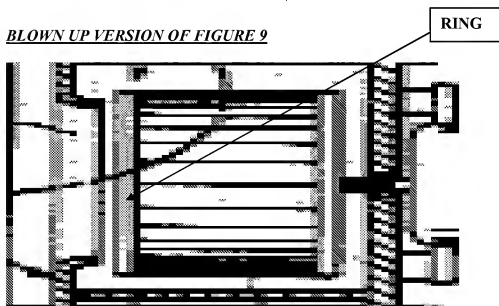
Regarding claim 2, Hosoda et al. teach the limitation of an outdoor air suction port (21a) being respectively formed at both lateral surfaces of the case (as illustrated in figure 8, since the outdoor suction port has a surface area, it is disposed at "lateral sides" of the case) positioned at the outdoor side (illustrated in figure 8), and an outdoor air discharge port (34) is formed at the rear surface of the case (illustrated in figure 8).

Regarding claim 3, Hosoda et al. teach the limitation of the outdoor fan being installed in a shroud (the combination of 24 and 25) mounted inside the case positioned at the indoor side (illustrated in figure 9), and the shroud is provided with an air guide (25) that guides air blown from the outdoor centrifugal fan to the outdoor heat exchanger [illustrated in figure 9].

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BLOWN UP VERSION OF FIGURE 9



Response to Arguments

Applicant's arguments filed 2/17/2010 have been fully considered but they are not persuasive.

On pages 5-6 of the applicant's remarks section, the applicant provides the following argument: *"Independent claim 1 recites, inter alia, an outdoor centrifugal fan positioned opposite to the outdoor heat exchanger that generates a centrifugal force to blow the outdoor air, wherein the outdoor centrifugal fan comprises a hub positioned so as to face the outdoor heat exchanger, wherein the hub is formed in a disc shape, and is connected to a driving motor by a rotational shaft; a plurality of blades each having one end protruding from a surface of the hub, and disposed at an outer side of the hub in a circumferential direction with the same interval therebetween; and a supporting ring coupled to another end of each of the plurality of blades to support the plurality of blades; and a dispersion ring connected to the hub of the outdoor centrifugal fan by a plurality of supporting ribs. None of the applied references, taken alone or in combination, discloses or suggests such features, or the claimed combination of independent claim 1."* The examiner respectfully disagrees. As described above in the rejection of claim 1, Hosoda et al. teaches all the limitations of the claim except for the details pertaining to the dispersion ring. Scott was introduced for the teaching of connecting a condensate dispersion unit to a fan and hub of an air conditioning fan, and one of ordinary skill in the art would have been motivated to include a condensation dispersion unit for the benefit of

preventing insects and bacteria from building up inside of the air conditioner. Therefore, the combination art rejection of claim 1 is proper.

On pages 6 and 7 of the applicant's remarks section, the applicant contends that none of the applied references teach the limitation "a dispersion ring is connected to the hub of the centrifugal fan by a plurality of support ribs." Also, the applicant provides the following argument: *"However, the dispersion ring 24 in Scott is coupled to blades of the blower fan 18 by lugs 22, while the claimed dispersion ring is connected to the hub of the outdoor centrifugal fan by a plurality of supporting ribs. Therefore, a diameter of the dispersion ring 24 in Scott must be larger than a diameter of the fan 18 and it is difficult to couple the dispersion ring 24 to the blades of the fan 18 because of the twisting angles of the blades. Further, the dispersion ring 24 coupled to the blades of the fan 18 would be easily separated considering the thickness of the blades."* The Examiner respectfully disagrees. As illustrated in figures 2 and 4 of Scott, dispersion ring 24 is connected to fan blades 18 and hub 12 by lugs 18. Although the lugs are indirectly connected to the hub, the lugs are integrally connected to the hub, thus connecting the dispersion ring to the hub. Therefore, for at least these reasons, the limitations of claim 1 have been met.

In conclusion, the Examiner respectfully submits that the rejections of the pending claims are properly upheld.

Conclusion

4. Accordingly, **THIS ACTION IS AGAIN MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AZIM RAHIM whose telephone number is (571) 270-1998. The examiner can normally be reached on Monday - Thursday 7am - 3pm EST and Friday 7am - 9:30am EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules can be reached on 571-272-6681 or Cheryl Tyler at 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. R./
Examiner, Art Unit 3744
3/19/2010

/Frantz F. Jules/
Supervisory Patent Examiner, Art Unit 3744